

Revisiting the concept of urgency in surgical prioritization and addressing backlogs in elective surgery provision

Kayla Wiebe MA, Simon Kelley MBChB PhD, Roxanne E. Kirsch MD MBE

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In Canada's health care systems, urgency has long been the first consideration in patient prioritization. In the context of allocating surgical resources, urgent procedures are prioritized over elective (scheduled) ones.¹ However, prioritizing urgency, particularly in times of resource constraints, leads to a problem of 2 wait lists: a growing wait list of urgent cases and a much larger wait list of scheduled cases that frequently become delayed past their appropriate wait times, leading to adverse patient outcomes. We discuss this problem, which we refer to as the urgency dilemma, as well as some potential solutions.

Two types of surgical cases are negatively affected by a narrow understanding of urgency. The first type is the scheduled case that will eventually become urgent, where the consequence of a delay in timely surgery is that the patient's outcome is worse than it would have been had they been treated earlier. As delays worsen, an increasing number of patients with scheduled surgeries progress to requiring urgent surgery. A 2022 cohort study suggested that delays in cancer detection will leave higher proportions of cancers "unresectable or incurable at presentation."² It is "a matter of time before elective cancer surgery becomes urgent,"³ adding further burden to a resource-constrained system.⁴ The problem becomes deciding where urgency begins such that health care resources can be appropriately allocated.

The second type of case is the one that will never escalate to an urgent classification. Here, the consequences of delay will not be loss of life or limb, but rather persistent and seriously compromised quality of life for the patient, in domains that may include development, mobility, fertility or mental health. Delays may increase the complexity of a surgery or lead to higher risks of complications or poor postoperative outcomes.⁵⁻⁷ Moreover, pediatric patients who require time-sensitive surgeries to coincide with critical developmental milestones may have life-long consequences of delayed surgery.

The surgical wait list problem has prompted calls from health care leaders to redesign how we deliver surgical care in Canada.⁸⁻¹⁰ Given the urgency dilemma we have described, we propose a multistep plan to improve access for scheduled surgeries while not abandoning urgent cases in the process.

Key points

- Prioritizing urgency in surgery in Canada leads to a problem of 2 wait lists: a growing wait list of urgent cases and a much larger wait list of scheduled cases that frequently become delayed past their appropriate wait times, leading to adverse patient outcomes.
- Many scheduled surgeries can become urgent and those that do not meet the urgency threshold, if delayed too long, can lead to persistent and seriously compromised quality of life for patients, in domains that may include development, mobility, fertility or mental health.
- Governments should fund health care systems to ensure timely completion of elective surgeries while still ensuring that urgent surgeries can be accommodated.
- Surgical smoothing, day surgery programs, and shifting to centralized referral systems and centralized wait list management for noncomplex surgical procedures, are practical approaches that health care systems can use to ethically address Canada-wide backlogs in elective surgeries, if adequately resourced.

The first step is to reframe what "urgency" and "scheduled" mean in surgery. Urgency is relative, and scheduled surgeries are not optional. "Urgent" and "scheduled" designations are not 2 discrete classifications of surgical importance; rather, they are 2 different and movable points on the same dynamic continuum of time-sensitive care. Reconceptualizing this continuum would allow and encourage health care systems to explicitly preserve room for scheduled cases. Urgent cases that can wait until the end of their urgency window should do so to allow scheduled cases more predictable access. To further account for this complexity, we encourage the development and validation of nuanced prioritization tools for scheduled cases that account for factors beyond degree of urgency, such as the risks associated with prolonged delay, impacts on quality of life and considerations of long-term disability. The recognition of additional factors would provide justification for sharing limited surgical time with a wider range of cases than just those deemed urgent in the traditional sense.

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Although increasing funds for perioperative care to hire additional personnel is necessary, improvements can be made even within the long-standing constraints of Canada's surgical systems. Scheduled surgeries that require inpatient or intensive care can be prioritized when demands on hospital beds are predictably lower, such as outside of the flu season, during the spring and summer months. Weekend surgical programs to complete low-acuity, high-volume scheduled procedures have been shown to reduce wait lists without adding to the inpatient hospital burden,¹¹ although hiring practices need to support the extra perioperative staff needed to avoid overextension of work hours for existing staff.

Surgical smoothing refers to a range of efforts to optimize efficiency in surgical booking and increase throughput. Examples include the use of novel surgery booking systems, such as pre-booked scheduling at time of consultation (instead of scheduling from wait lists), which have been shown to improve access for scheduled procedures with fewer cancellations.¹² Machine learning algorithms can be used to optimize efficiency in case booking, accounting for variables such as specialty, individual surgeon, case length and case type.¹³ Using more efficient and reliable methods of booking can help offset the continuing problem of personnel shortages in anesthesiology and nursing. Ambulatory surgical centres that function within regional health care partnerships, rather than as siloed entities, can effectively distribute surgeries by geography, expertise and acuity.¹⁴ Centralized booking and single-entry referral systems for scheduled procedures have also been shown to maximize use of operating resources and clear wait lists of standard, but necessary, procedures.⁸

Urbach and Martin⁸ identified resistance from physicians and the structure of health care systems as major barriers to improving surgery wait times in Canada. They highlighted uncertainty and fear, both of which are exacerbated by crisis, as key drivers of reluctance among health care providers. The current system structure requires surgeons to vie for limited operative time and incentivizes competitive individualism, rather than cooperation and resource sharing. The fee-for-service payment model that is dominant in Canada may provide a financial impetus to maintain long wait lists, and the absence of a centralized referral system likely perpetuates this. Furthermore, the current system obscures the inequities that arise from the fee-for-service model and individual referral processes. Although concerns about financial security are certainly valid, wait lists with a centralized referral system will allow for enough surgical volume to ensure surgeons are appropriately compensated and might even counteract inequities embedded in current referral patterns.

Maintaining the status quo may benefit some surgeons and select patients, but most patients wait too long for elective surgery, and many surgeons struggle to receive equitable referrals and book operating time.¹⁵ Therefore, aspects of the current system function as bottlenecks to patients and providers, and increases in funding, although necessary, will not reduce the backlog or improve equitable access without system-level changes. Governments must provide substantial increases in funding and incentivize institutions and individual practitioners to centralize and collaborate. In turn, hospitals and individual

practitioners should be active partners in designing, piloting and sharing innovative programs that will ultimately transform health care delivery.

Surgical wait lists are a long-standing example of discrepancies between patient need and health care supply. Greater financial and personnel resources to support surgical infrastructure in Canada's health systems are certainly needed; however, some solutions could be applied right away to tackle surgical backlogs. Elective procedures should be conceptually and practically reframed as being on a continuum with urgent procedures, and surgical smoothing techniques, centralized booking and single-entry systems could be implemented to optimize efficiency and reduce wait lists for scheduled surgeries. More explicit efforts to prioritize scheduled cases while maintaining capacity to offer life-saving surgery could be used to reduce morbidity among surgical patients within Canada's health care systems.

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Affiliations: Graduate Department of Philosophy (Wiebe), University of Toronto; Clinical Research, Perioperative Services (Wiebe), The Hospital for Sick Children; Division of Orthopedic Surgery (Kelley), The Hospital for Sick Children; Department of Surgery (Kelley), Faculty of Medicine, University of Toronto; Departments of Bioethics and of Critical Care Medicine (Kirsch), The Hospital for Sick Children, Toronto, Ont.

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Correspondence to: Kayla Wiebe, kayla.wiebe@sickkids.ca